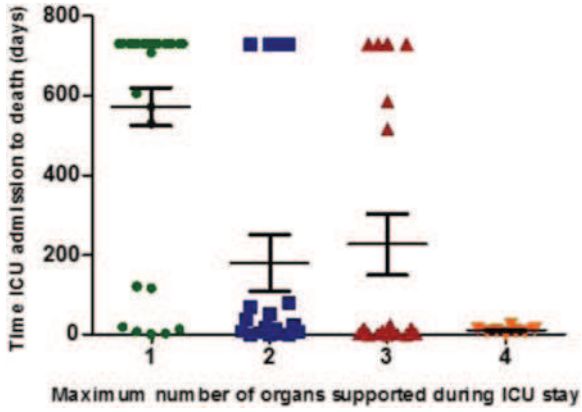


**Fig. 103 (Abstract P412).** Association between number of organs supported and mortality (means with SEM).

## P413

### Acquired weakness in an oncological intensive care unit

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**Introduction:** Intensive Care Unit–acquired weakness (ICU-AW) is a frequent complication of critically ill patients with an approximately incidence of 25%-50%. The diagnosis is clinical and consists in assessing the strength of various muscles groups in the upper and lower extremities. This problem represents one of the greatest burdens patients face after surviving ICU care. Objectives: To assess the incidence and identify clinical factors associated with ICU-AW in an Oncology Center.
**Methods:** Retrospectively collected data on patients admitted to the ICU between January 2013 and December 2014 were reviewed. Patients admitted to the ICU, aged > = 18 years, mechanically ventilated for > = 48 hours and with the final diagnosis of ICU-acquired weakness were selected. Predictive factors of ICU-AW were identified using multivariate logistic regression analysis.
**Results:** From the 177 patients included, 20,3% developed ICU-AW. The mean age was 57,3 years and 58,3% were female. The median time of mechanical ventilation was 343,5 hours. 55,6% of patients had solid tumors and 44,4% had hematological malignancies. Glucocorticoids and neuromuscular blocking agents were administered in 88,9% and 38,9% of patients, respectively. Septic shock developed in 72,2% of patients and was found to be a predictive factor for developing ICU-AW (OR 4,15, pvalue 0,018). 66,7% of patients started or continued physical rehabilitation during the hospital length of stay approximately 12 days after admission in the ICU. 44,4% of patients with ICU-AW died 37 days after admission in the ICU. 8 patients (22,2%) with ICU-AW were re-evaluated by physical and rehabilitation medicine 144 days after hospital discharge. Significant improvement was noted in their physical status while in the program of physical therapy.
**Conclusions:** ICU-AW is a relatively frequent problem and septic shock was found to be a predictive factor for the development of this entity. Early mobilization is an important intervention to decrease the weakness and physical deconditioning in the critically ill patients.

#### References

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## P414

### Musculoskeletal problems in intensive care unit (ICU) patients post-discharge

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**Introduction:** The aim of this study was to examine the incidence of musculoskeletal problems (i.e. pain, weakness, decreased joint range of movement) in critical care patients post discharge. Post intensive care syndrome (PICS) is now a widely used term to describe the collection of problems patients develop due to their stay in intensive care. ICU survivors have been found to have a high risk of developing not only psychological problems but physical problems such as Intensive Care Unit Acquired Weakness (ICUAW) and chronic pain [1, 2].
**Methods:** Discharged patients from ICU attended a 5 week multidisciplinary rehabilitation programme as part of a quality improvement initiative within Glasgow Royal Infirmary ICU. Participants completed a one-one musculoskeletal assessment with an ICU physiotherapist. Ethics approval was waived as the programme was part of a quality improvement initiative.
**Results:** Data was collected from 47 of the 48 patients who attended the programme (median age was 52 (IQR, 44-57), 67% of the patients were men, median ICU length of stay (LOS) was 15 days (IQR 9-25) and median APACHE II was 23 (IQR 18-27). 66% of participants (n = 47) reported a new incidence of pain since discharge from ICU, 28% reporting lower limb (LL) pain and 25% reporting shoulder pain. Bilateral symptoms were reported in 84% of those who complained of lower limb pain in contrast to 25% of those with shoulder pain. In relation to muscle weakness, 74% of participants presented with LL weakness compared with 51% in the upper limb (UL). UL joint range of movement was reduced in 40% of participants and a 19% reduction for the LL. 23% of all participants reported numbness in UL/LL or both.
**Conclusions:** Musculoskeletal problems especially shoulder pain and bilateral LL pain and weakness remain a significant problem for survivors of critical illness. This may have implications regarding falls risks, exercise capacity and reduce the likelihood of patients returning to work. Shoulder pain was found to be one of the most common complaints of pain supporting other research [1] with contributing factors such as the position of ventilator tubing, dialysis lines or central lines hypothesised. Collecting this data has helped raise awareness of these problems and may strengthen the case for more equipment for active mobilisation in ICU and herald a need for increased understanding in downstream wards on ICUAW.

#### References

1. Battle et al, Critical Care; 17:R101, 2013.
2. Griffiths et al, Critical Care; 17:R100, 2013.

## P415

### Premorbid obesity, but not nutrition, prevents critical illness-induced muscle wasting and weakness

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**Introduction:** The 'obesity paradox' of critical illness refers to better survival with a higher BMI. We hypothesized that fat mobilized from excess adipose tissue during critical illness provides energy more efficiently than exogenous macronutrients and could prevent lean tissue wasting.
**Methods:** In a centrally-catheterized mouse model of cecal ligation and puncture (CLP)-induced prolonged septic critical illness, body weight and composition, and muscle wasting were assessed in lean and premorbidly obese mice, each with fasting and parenteral